

VIDEO GAMES EXPRESS

VOLUME 1, NUMBER 6

APRIL, 1984

NEW GAME REVIEWS

by Troy Kindred

TX-1 (Atari)

OVERVIEW - The multiple-course layout features the sights and sounds of racing in many different parts of the world, including Japan, France, South Africa, Italy, Monaco, Belgium, Spain, and the U.S.A. The realism of the racing environment is intensified by the wrap-around action of the 3 screens (3 monitors side by side). TX-1 was created by Tatsumi and licensed by Namco. This is

an enhancement of Pole Position with many new features. Available as a sit-in only.

GAME ACTION - The play begins as the driver crosses the starting line, racing against the clock to complete each of 5 stages within it's preset time limit (operator selectable) and continue immediately into the next. At each checkpoint or fork in the road, the player selects

continued on page 2



which way he will go. Depending on those choices, he will end up in one of 8 different countries. Bonus points are awarded for every car passed and for the completion of each stage. If the player is good enough to cross the finish line, a special bonus is awarded for each second remaining after crossing the finish line. The race has many thrills and dangers. At intervals, the scene changes from day to night. Depending on the route selected, the player speeds through city, desert, mountain ranges and even snow country. He moves uphill, downhill and through the trickiest of hairpin curves. And he experiences the sensation of driving through a tunnel just prior to the end of each stage. The steering is very realistic. When going into a skid, the loss of steering causes the player to take his foot off the accelerator until he regains his alignment on the track. Around corners, he must brake, downshift, or at least slow down to avoid the risk of losing control. Going around a corner too fast or turning too sharply at any time will guarantee a spinout. Driving off the side of the road will almost certainly cause a crash into something (trees, light poles, etc.) along every part of the course. There is a high score table for each of the 8 tracks and a Top 100 overall. When entering a high score, a car on the screen turns as the player changes the letters.

ORIGINALITY - Same basic idea as Pole Position but with several additions. The game has 3 monitors (left to right), a speaker under the seat (new for a driving game), and the ability to spinout rather than just crash into something. (7)

GRAPHICS - Much more variety than Pole Position due to the one-way route to the countries represented, plus light poles, trees, and tunnels. The road has 2 shades of gray which alternate, to give the sensation of the speed you are going. Graphics are simple but adequate. (7)

SOUND - Very realistic. Has 4-channel sound. Speakers include one in the front, one each on the left and right rear, and one under the seat (providing vibration). The sound changes when you go through tunnels. Otherwise very similar to Pole Position. (8)

CONTROLS - An accelerator, brake, steering wheel, and a 2-position gearshift. The accelerator and brake are of a new design (operates on the same principle as the steering wheel) that virtually eliminates the possibility of breakdowns as is common in Pole Position.

OPINION - Very challenging. Somewhat the same as Pole Position but with enough new features to make for a different and fun game. You can't just floor it all the way through. You must skillfully drive and slow down on the curves. It isn't easy to get to the end (I didn't in the short time I had to play it) so the game should hold interest. Only the best and/or most experienced players will be able to finish. A good racing game is guaranteed to be a hit and this one will be also. Game will sell for around \$6995 (that's \$7000 plus \$455 sales tax in California). This price alone will guarantee that the game will not be everywhere or hardly anywhere. Will do well, but not quite as well as Pole Position because of the similarities between the 2 games.

OVERALL RATING - (8)

EARNINGS POTENTIAL - (5) This rating would be higher except for the purchase price of the game. We question whether an operator would make a profit.

10-YARD FIGHT (Taito)

OVERVIEW - It's 3rd & 10. The crowd is on its feet. Cheers fill the stadium. "36-88-24, Hut-hut-hut." The ball is snapped. You grip the hard, cold pigskin and the game is in your hands. You scramble left to avoid a flying tackle and look downfield. A receiver is open. You pump for a forward pass. It's complete for a 10-yard gain and a 1st down! A computer generated football game. Available as an upright.

GAME ACTION - Each level (High School, College, Pro, and finally Super Bowl) begins with the player carrying the ball from the kick-off as far up the field as he can before being tackled. It is then 1st and 10, and the player has up to 4 downs to make a new first down. You are the quarterback, choosing the time to receive the ball, then running with it or going for a forward pass or a lateral to a receiver who lets you know he's open by waving his arms (you cannot pass unless the receiver's arms are up - you are still behind the line of scrimmage). If the pass is completed, the receiver runs as far as he can. If the pass is intercepted, a 20-yard penalty is called. The game starts with 60 seconds and the clock stops when the play is over or the player goes out of bounds.

If you can gain at least 10 yards by the 4th down, you automatically receive a new 1st down and 6 or 10 seconds more time on the clock. The quicker you make the 1st down the more points you get. If you don't get 10 yards in 4 downs, a penalty of 10 yards is made. Touchdowns must be made in the time allotted. Once you make a touchdown you can get the extra point by either kicking or running with the ball. There are 2 halves per level and a touchdown ends a half. When you are tackled by the defense, you can avoid the tackle by rotating the joystick quickly, but you can only use this technique 3 times per down. Points are awarded for touchdowns, forward passes, kicking plays, running plays and for each second you are carrying the ball. 8 players per team.

ORIGINALITY - Another in a series of football games, this one with computer graphics. The game play is pretty good. (5)

GRAPHICS - Simple but adequate. Screen scrolls left/right and up/down. After each play a referee comes out, and if appropriate, calls out "First Down" or "Touchdown." (4)

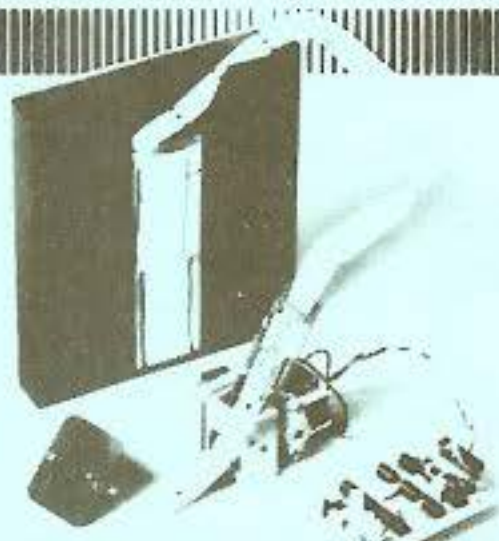
SOUND - There wasn't much to the sound but it was unique. Running, "hut-hut," and the crowd sounds. Nothing copied from other games. (5)

CONTROLS - 8-way joystick, "forward pass," and "side pass" buttons.

OPINION - Even though I like football, I didn't like the game that much. I do think, however, that the game will do well. Unfortunately, it came out after the regular football season, and that may have an effect on the play.

OVERALL RATING - (4)

EARNINGS POTENTIAL - (7)



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JACKRABBIT (Zaccaria)

OVERVIEW - Hallo! I am Jackrabbit. I like carrots. I am really hungry. Will you help me? Available as a dedicated upright.

GAME ACTION - In the first frame, all the carrots must be picked up by Jackrabbit, being careful not to fall or jump into the holes and watching for the enemies. In the second frame, the screen scrolls to the left and the object is to get to the right edge, picking up as many carrots and bonus fruit along the way. The third frame has a layout similar to "Q-Bert" and the goal is the same, get the carrots and change the color of the square. You must avoid objects being thrown down from the top (exactly as in "Zookeeper"). Then you return to frame one where the action is the same but faster and enemies and holes are added. Enemies include snakes, cactus, bombs, and bears. On frames one and three, going off the screen brings you back on the opposite side. There doesn't seem to be any time limit on the first frame, so a player could stay there forever, just avoiding the enemies.

ORIGINALITY - The rabbit eating carrots is original. Otherwise, the game borrows ideas from "Q-Bert," "Zookeeper," and "Money-Money" (another Zaccaria game). Too much copying. (3)

GRAPHICS - Average quality. Nothing special. (5)

CONTROLS - Has a weird 4-way joystick (not the standard 4 directions), and a jump button. There is a delay between the time the joystick is moved and the time the rabbit moves.

SOUND - Has several tunes, not the same music over and over as long as you don't lose a man (then the sequence of tunes starts over again). Rabbit jumping sound and bombs exploding. Except for the music, limited sound. (5)

OPINION - A cute game. BUT, games that require primarily a diagonal movement are usually doomed to failure because it is difficult to get the joystick in the precise direction you want to move (it is more critical). The game has a continuation feature but it only works if

you end your game on the first 3 frames. If you were 3 good enough to get past the first 3 frames, you must start at frame one on the next play. There should have been more than 3 boards. Players look forward to seeing a new board each time a board is conquered.

OVERALL RATING - (6)

EARNINGS POTENTIAL - (2) Would have done better as a conversion, but again, the diagonal play would limit it's appeal.

FLASH: PAO SHOW CANCELLED

As we go to press, we have received notification that the Pacific Amusement Operators Show scheduled for April 6-8, 1984 in Anaheim HAS BEEN CANCELLED. We hope that this notification reaches all of you in time so that you don't go down there and find no show. Please notify as many people as you can in the industry.

Terry Cunningham of Westco Amusements, sponsor of the show, said that he cancelled the show due to the withdrawal of several major exhibitors. Mr. Cunningham plans to reschedule the show in the early fall.

Since we are now unable to distribute this issue at the show, we are sending this issue to operators in several other states to keep our promise of a circulation of 2,000 for this issue.

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TIN STAR (Taito)

OVERVIEW - Zeke's latest adventure, this time as a sharp-shootin', rootin'-tootin' Sheriff out to tame the Wild West in the days when man's best friend was his horse. On the side of law and order, and behind the "Tin Star," Gitalong Zeke rides into the town of Cactus Gulch to protect the law-abiding citizens from no-good bandits and varmints. Available as a dedicated upright and a conversion (for any game).

GAME ACTION - On the streets at high noon, Zeke arrives and dismounts his horse. He must shoot his way out of an ambush as the bad guys fire at him from the rooftops, windows, doors, and the street. Barrels are rolled at him to divert his attention and knock him flat. Winning against the ambush, Zeke enters the saloon, where he encounters more bandits, hiding behind the bar, the piano, and at the windows. He can score double points by standing on top of the table, and the bottles behind the bar can be broken for additional points. In the third scene, Zeke enters the K.O. Corral (inside a barn) where a brawl is in progress. Again he must eliminate the bandits, but this time he can climb one of the ladders to the upper level. From that location, he can shoot down to the lower level and is safe from lower level bandit fire. Zeke gets double points for jumping down on the bandits. Finally, there is a 2-second bonus round in the desert where lonesome lawman Zeke can double his score by shooting the hombre from his horse. Subsequent rounds use the same sequence of screens, but the action gets harder and harder. Keep on the lookout for hidden targets for bonus points. Bandits disappear behind obstacles and reappear elsewhere. Good luck. Zeke and Cactus Gulch are depending on you. Game has a visual indicator at the lower right showing the number of bandits left on the screen. The game we played started with 5 men.

ORIGINALITY - Same basic idea as Front Line and Wild Western but with a different background. Sound is original. (?)

GRAPHICS - Simple but good, nothing outstanding. Detail on faces was good. (?)

SOUND - Varied music, sounds for shooting, breaking bottles, hitting bandits, and jumping. All except shooting sounds were original. (8)

CONTROLS - Has an 8-way joystick for moving Zeke, a rotating combination shooting direction and fire button (like Front Line) and a jump button.

OPINION - I think the game is good enough to create player interest. I enjoyed playing it.

OVERALL RATING - (7)

EARNINGS POTENTIAL - (6) dedicated.

(8) conversion.

The purpose of our reviews is to aid you in your buying decisions. We don't claim to be all-seeing and all knowing as far as how well each game will do, but we WILL give you an honest evaluation. Our reviews and ratings are independent of any advertising and will never be inflated to encourage advertising in our publication.

Our video game reviewer is Troy Kindred, age 20. He is the world record holder on "Happy"; was a member of the 1983 Northern California Video Game Team, and works in an arcade.

A message to the manufacturers reading our reviews: If you have a good game we will say so (and we sincerely believe that you try to produce good games). But, if we don't feel a game is good, we owe it to our readers to say so. Look at it this way, unless an operator makes a profit on a game, he doesn't have money to buy additional games (quite possibly one of yours). This effect snowballs so several sales can be affected over a period of time. And, too many wrong choices may mean one less customer when the operator goes out of business. So an honest review, even if rated low, is good for everyone, ESPECIALLY YOU, the manufacturer.

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We have cancelled our membership in an organization that promotes better business. We have just been told that we cannot tell you that we are a member (even though before we joined, we were told that we could do so as long as we didn't use their logo). We cannot tell you the name of the organization in this article because AGAIN they say we cannot tell you we AREN'T A MEMBER without risking legal action from the organization for "infringement of copyright." We find it hard to believe that there is an organization that solicits membership from business for financial support (we paid over \$100 for one year), and then absolutely prohibits it's members from telling whomever they want of their membership or even the lack of membership. We will have no part of an organization with what we consider UNREASONABLE rules.

We are still "registered" with this organization (registration is NOT membership) and you are welcome to call it and get a report at any time (should you get any negative information of any kind, please let us know - with their attitude, we MAY get a negative report because of our membership cancellation).

We still support the principles of the organization as it relates to the proper conduct of a business. We do NOT support the above-mentioned attitude.

5

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From his game reviews to all the hours he spent assembling each of our first 4 issues, his efforts should be publicly noticed. Without his efforts Video Games Express wouldn't be what it is today.

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VS. TENNIS (Nintendo)

OVERVIEW - A new and unique idea in video games which is sure to be copied by others. A tennis game with 2 monitors, VS. TENNIS can be played by 1-player vs. the computer, 1-player vs. 1-player, 2-players vs. the computer (doubles), and 2-players vs. 2-players (doubles). Or 2 separate and independent games can be played against the computer (either 1 or 2 players each) at the same time. In a game matching player(s) vs. player(s), each side uses one of the 2 screens. When playing this way, each side has a frontal view of the tennis court from the tennis player's perspective, and is actually playing against the other player or team. Available as an upright (2 monitors side by side) or a sit-down (NOT a sit-in) with the monitors back to back on a 45-degree angle. Nintendo plans to make a new sports game (conversion) available every 3-4 months, the next one being "VS. BASEBALL."

CONTROLS - We are explaining the controls now to make it easier to explain the game action. Each player has an 8-way joystick which is used to move the tennis player around the court. An "A" button will serve, ground stroke, volley, or smash. The "B" button will lob. There are 4 sets of controls.

GAME ACTION - To start play, each player deposits 1 coin, and then pushes one of 4 color-coded buttons, depending on how they wish to play (see Overview above). The game begins by automatically tossing the ball for service. The game player pushes the "A" button to serve (it will serve automatically on the 4th toss). Then one of the players (or the computer) will attempt to return the ball. Scoring is the same as in regulation tennis (15-30-40-win) including the requirement to win by 2. The game ends for a player or a team when 3 games are lost by the player. The winning player(s) in 2 or 4 player games vs. each other can continue playing against the computer or the losing player(s) can insert more coins and continue. This is not the easiest game to explain because of the numerous options available. It's easier to play.

ORIGINALITY - The first tennis game. Several things stand out: playing against the computer or another player with the view as if you are playing it in person, and up to 4-player competition. (8)

GRAPHICS - Not much to them. The crowd looked more like an ocean than a crowd (and no movement). The referee, who turns his head as the ball moves, is a nice touch. (4)

SOUND - Not much. The ball going back and forth and a very short tune at the end of the match. Admittedly there aren't many possibilities for sound, but more could have been provided, such as the referee calling out the "faults" and whether the ball was in or out of bounds instead of just printing it on the screen. No real effort at all in the sound department. (3)

OPINION - The best part of this game is the direct competition aspect, coupled with the 2 monitors. This game is really two separate games in one cabinet, but with the capability of being one competitive game at the option of the players.

OVERALL RATING - (7)

EARNINGS POTENTIAL - Should do well in most locations. (7). If conversions are good games and the operator makes the conversions. (9)

PUNCH-OUT (Nintendo)

OVERVIEW - Fight your way to the championship title against the World Video Boxing Association's top ranked contenders. Meet masters of the glove from around the globe... like the up-and-coming Glass Joe or the gutsy Bald Bull. Only a knockout before the clock runs out will keep you in the running for a chance at the Champ himself, the mighty Mr. Sandman. Defeat him and the title is yours - for as long as you can defend it! It's the fight of the century and Punch-Out puts you in the middle of the action against six of the meanest, toughest boxers of all time. Let's keep it clean and come

continued on page 14

CORRECTION

In the review of "Marvin's Maze" in our last issue, we remarked that the game we had played had an 8-way joystick that made the game hard to play. We then commented that SNK supplies the joystick.

SNK does supply a joystick, but a 4-way joystick. It appears that the person who converted the game didn't change the joystick from the previous game.

This is a case in point. When the manufacturer makes a kit, they supply those parts that will be needed for proper game play. Install all the parts, don't try to cut corners. Not changing the joystick has probably cost the arcade a substantial sum of money in lost revenue. Haste makes waste.

Video Games Express is published monthly in San Jose, California. Subscription rate: \$15.00 for 12 issues. Back issues are \$1.50 each. Address all correspondence to: Video Games Express, P.O. Box 1956, San Jose, CA 95109. (408) 279-1122.

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TECHNICIAN'S CORNER

GAME: Mario Bros.

SUBJECT: Coin/Credit Problems

Recently we have received reports that there may be a problem on Mario Bros. with receiving credit after inserting coins. These reports have been mainly with the Nintendo-Pak™, due to the fact that on our previous games the timing of the coin switch closure was not critical, whereas on Mario Bros. the timing is critical. Many times this may be resolved by just adjusting the coin switch actuator wire such that it "makes" just as the coin starts to come out of the mechanism. This allows for a greater amount of closure time. If problems continue, we have a modified version of the main operating program available through our distributors which decreases the required amount of time of switch closure from 32-48 ms to 16-32 ms. After these measures are taken, you should experience trouble-free operation of the coin/credit circuits.

The part number for this modified program is TMAU-21-05, and as mentioned before, it is available through our distributors.

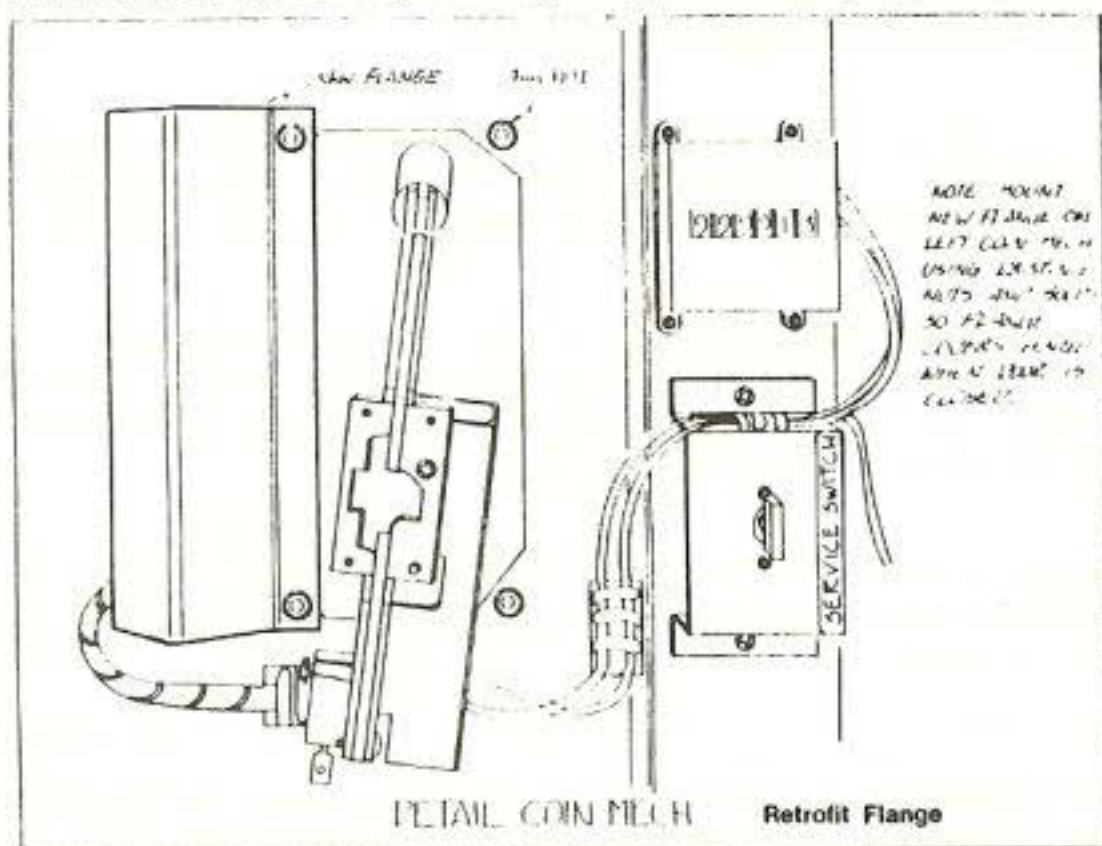
GAME: Donkey Kong Junior, Donkey Kong, Radar Scope

SUBJECT: Upper Coin Door Hinge

It has been brought to our attention that a flattened straw or similar object can be passed through the center opening in the upper hinge. If the object makes contact with the coin switch, it can be used to run up multiple credits.

The solution is to block the opening with a flange made of wood or metal. This flange should be mounted to the inside of the cabinet and can be obtained from us as a retrofit kit.

This problem is present in all Radar Scope uprights, Donkey Kong uprights and early Donkey Kong Junior uprights.



GAME: Donkey Kong, Donkey Kong Junior

SUBJECT: Video Wrap Around on Left Side of Picture

We have recently received a number of service calls concerning the wrap around or fold over of the picture on the left hand side of the monitor. In most cases the problem may be solved by replacing capacitor C407 on the main monitor PC board. This is located just to the left of the high voltage cage when viewing from the rear of the monitor. The value of this capacitor is 10 microfarads at 160 volts (of course, any capacitor of 10 microfarads with a voltage rating higher will work also).

This capacitor is connected between ground and the B+ supply for the vertical output transistors, so if this capacitor becomes leaky it does not allow full vertical deflection of the screen; consequently, you get video information imposed over the other (wrap around).

Nintendo

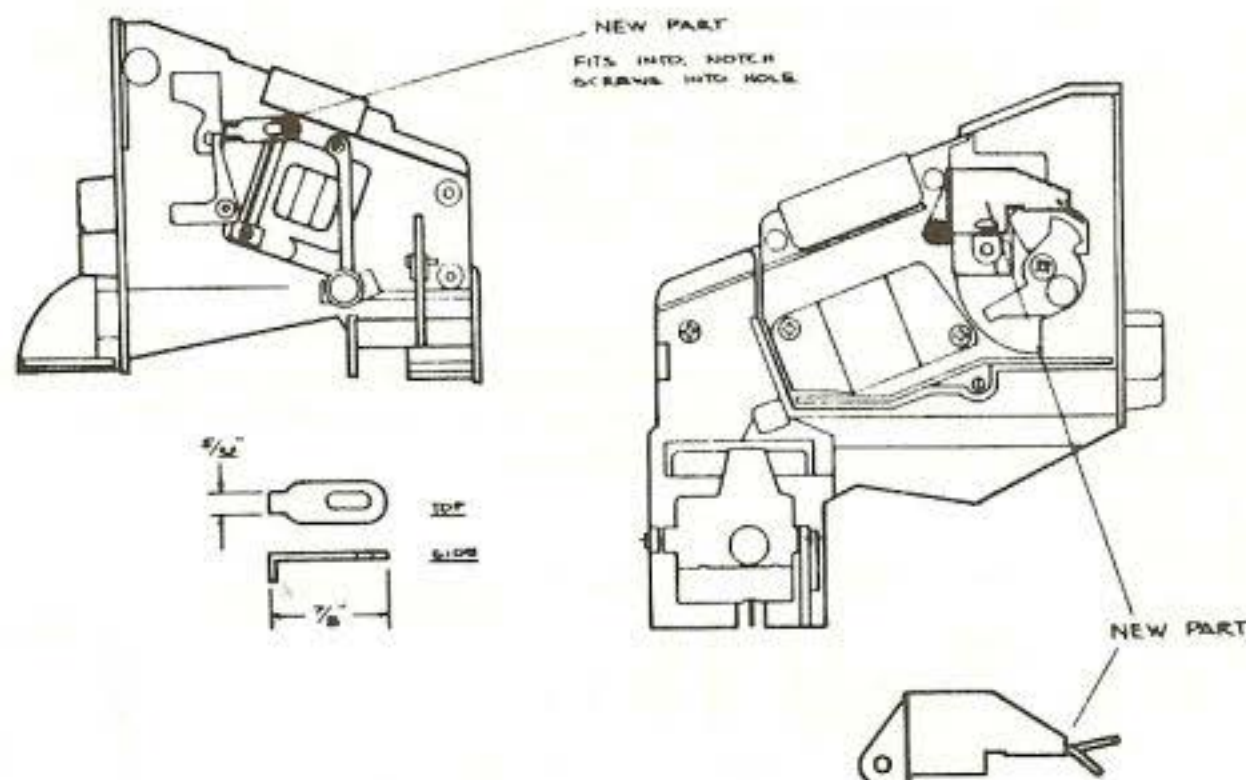
SERVICE DEPARTMENT

GAME: Donkey Kong Junior

SUBJECT: Model #730A Coin Selector

It has come to our attention that there is a problem with the model #730 A coin selector in that a nickel or a penny, if flipped through the entry just right, will continue through the mechanism and establish credits.

The solution to this problem is to add two small metal pieces to the selector as shown in the accompanying drawing. These pieces are available at no charge. The threaded holes in the selector is an M3 X 6MM size.



GAME: Donkey Kong, Donkey Kong Junior, Popeye, Mario Bros. Donkey Kong 3

SUBJECT: Slam Switch

In order to prevent the accumulation of free credits by kicking the coin door, a slam switch should be added.

In all cases the switch (a "normally open" weighted reed switch) should be mounted on the coin door. Connect one side of the slam switch to the brown wire on the coin switch (ground). The other side of the slam switch should be connected to a wire which will be run through the wiring harness to the CPU board. At this point the installations vary for the five (5) games.

Donkey Kong:

TKG2 and TKG3: Attach to Test Point 8, at board coordinates 3L.

TKG4: Attach to Test Point 2-RESET, at board coordinates 1L.

Donkey Kong Junior:

Attach to Test Point 2-RESET, at board coordinates 1L.

Popeye:

Attach to C13 (47µF electrolytic capacitor), "+" side, at board coordinates 2N.

Mario Bros.:

Attach to C38 (100µF electrolytic capacitor), "+" side, at board coordinates 4F.

Donkey Kong 3:

Attach to C25 (100µF electrolytic capacitor), "+" side, at board coordinates 2E.

GAME: Donkey Kong

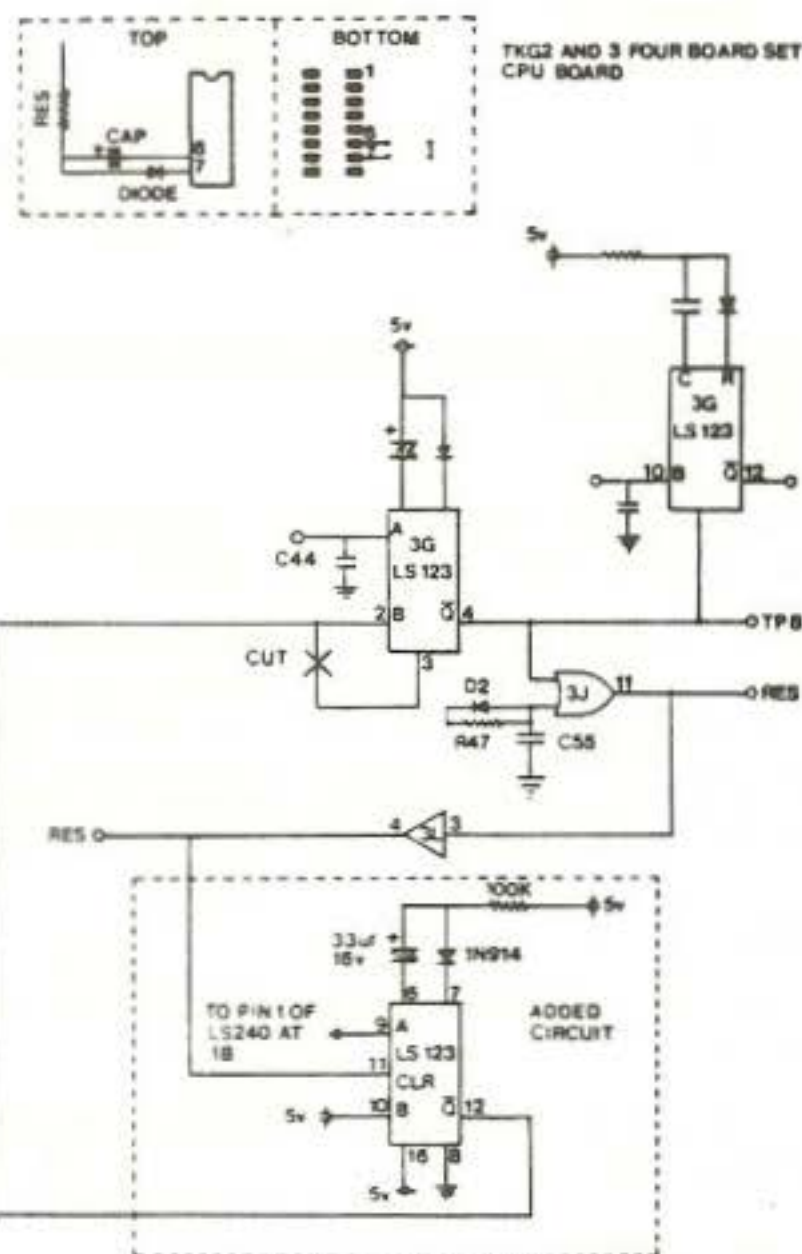
SUBJECT: Static Problems

It has come to our attention that static electricity can cause problems with the electronics in our game. Typical problems include flipping of the picture, garbage on the screen or loss of moving objects. Turning the game off and then back on will cure this problem.

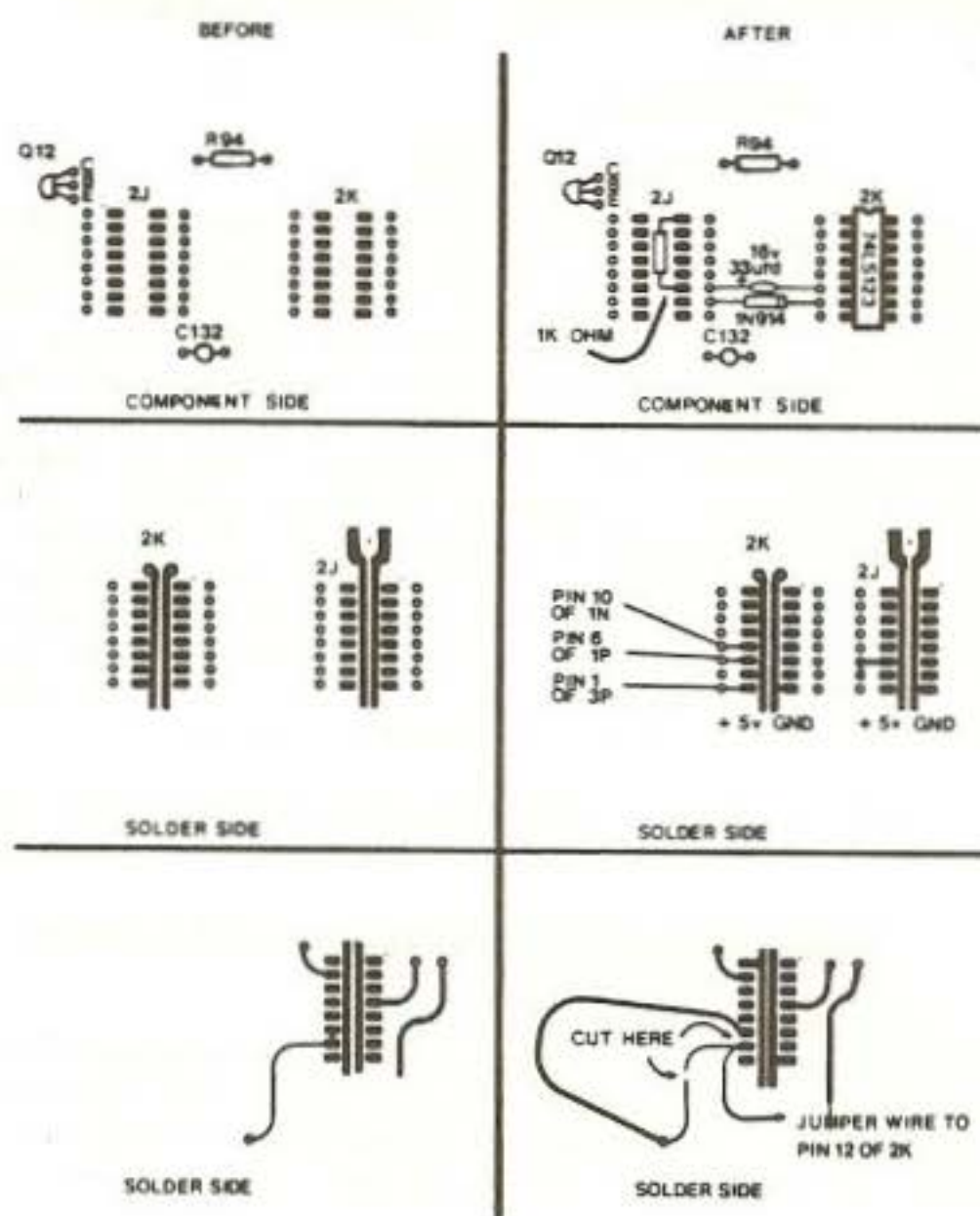
To attempt to prevent this problem we suggest two (2) modifications which should be made at the same time.

- 1) Increase the grounding system to the coin door and control panel. Run a ground wire from the coin mechs and the control panel ground to the power switch plate at the rear of the cabinet. It is important to keep these wires as short as possible.
- 2) Add a capacitor to the CPU Board. Use a .1 μ f ceramic disc with a voltage rating above 5 volts. For TKG2 and TKG3 boards the IC location is 3M. For TKG4 boards the location is 5H. In both cases the capacitor ties between pin 15 and pin 8. This should reduce noise being induced onto the reset line.

If these modifications do not prove satisfactory, there is an added circuit which can be used. This requires additional components which are available at any electronics store. A schematic of this circuit follows.



TKG4-11,12,13 CPU BOARD RESET CIRCUIT



GAME: Radarscope, Donkey Kong, Donkey Kong Junior

SUBJECT: Interchangeability of Hybrid IC's in Power Supplies
PP7A (3D-1000) & PP7B (3D-1001)

- 1) Due to a lack of availability of Hybrid IC 3D-1000, we wish to inform you that the IC 3D-1001 can be used in place of the 3D-1000 with only minor modifications to the power supply circuiting.

To replace a 3D-1000 in the PP7A +5V circuit (IC1), add a polyester capacitor (.1 μ f/50V) across VR2 (2k pot). Also add an electrolytic capacitor (10 μ f/16V) between pin 10 (+side) and pin 11 (-side) of the 3D-1001.

- 2) To replace a 3D-1000 in a PP7A -5V circuit (IC2), add an electrolytic capacitor (10 μ f/16V) between pin 10 (+side) & pin 11 (-side) of the 3D-1001.

Should you encounter a problem which is not covered by these bulletins, or should you have any questions concerning the information contained in these bulletins, please feel free to call one of the numbers below and ask for Wayne, Rob or Jon. We will make every effort to help you find a solution to any problem you experience with Nintendo of America's product line.

GAME: Donkey Kong, Radar Scope

SUBJECT: Frozen and Scrambled Screen Problems

We have found that a great deal of the time the above problem is caused by sockets on the CPU Board intermittently losing connection to the EPROM's. To remedy this problem, replace the sockets with a type that makes contact with the pins on the "flat" side, as opposed to the edges. This problem is found on the four-board sets TKG2, TKG3, and TRS2. Chip locations are 5F, 5G, 5H and 5K. We suggest that you replace these sockets only in the event this problem occurs.

1-800-633-3236

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TECHNICIAN'S CORNER



9

GAME: QIX, KRAM, SPACE DUNGEON, ELECTRIC YO-YO, ZOO KEEPER, ALPINE SKI, WILD WESTERN, JUNGLE HUNT, FRONT LINE, ELEVATOR ACTION

SUBJECT: POWER SUPPLY BRIDGE RECTIFIER (BR1) HEAT SINK KIT

SOLUTION: REMOVE BR1 FROM POWER SUPPLY BOARD AND MOUNT BR1 ON A SEPARATE HEAT SINK. THIS WILL ALLOW BR1 TO DISSIPATE ITS HEAT AWAY FROM THE F1 FUSE HOLDER.

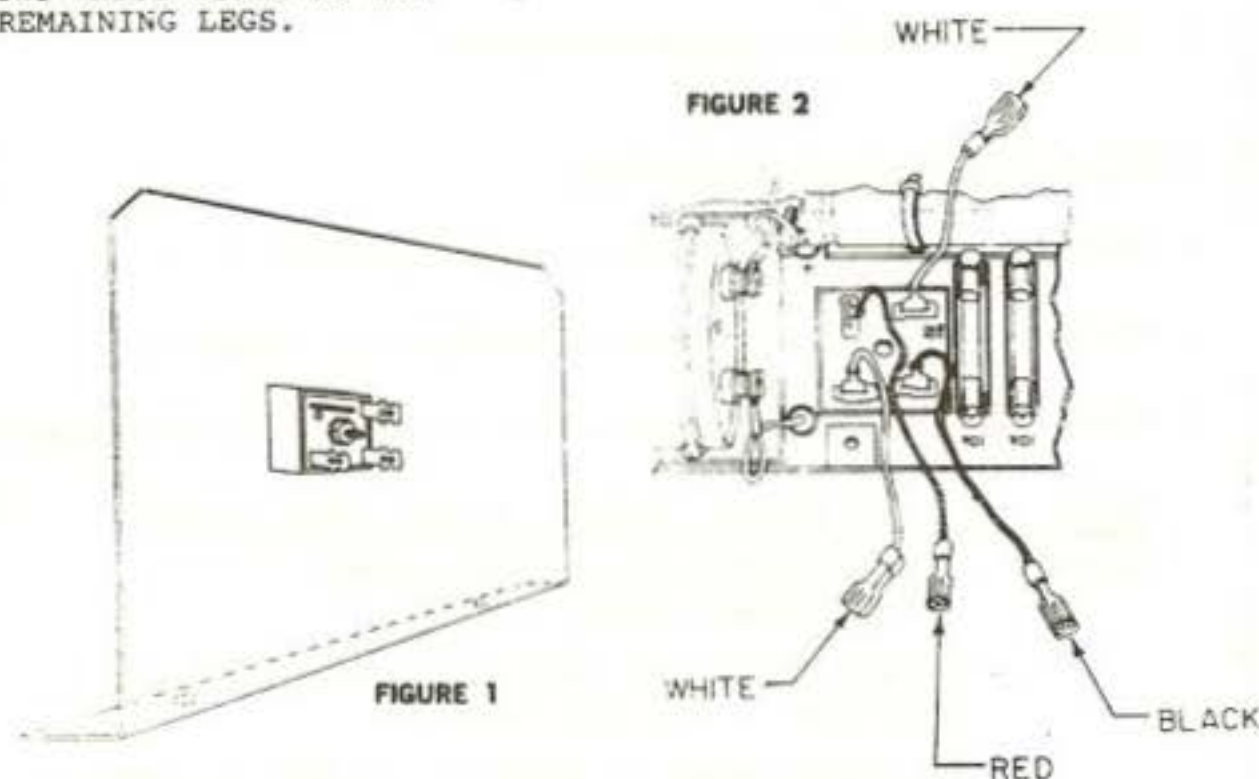
PARTS NEEDED: 1 HEAT SINK KIT PART NO. 03-00033-001
HEAT SINK COMPOUND (SILICON GREASE)

PROCEDURE: REMOVE POWER SUPPLY BOARD FROM POWER SUPPLY ASSEMBLY. REMOVE TRANSORB (DIODE, IF ANY) THAT IS ATTACHED TO LEGS OF BR1. REMOVE BR1 FROM POWER SUPPLY BOARD, CLEANING THE SOLDER OFF THE LEGS. REMOVE THE EXISTING HEAT SINK THAT IS ON THE BRIDGE (IF ANY). APPLY HEAT SINK COMPOUND TO THE FLAT TOP SURFACE OF BR1. ATTACH BR1 TO THE NEW HEAT SINK, USING THE SCREW AND KEPS NUT, (AS SHOWN IN FIGURE 1). LOOSEN THE TWO REAR SCREWS ON THE TRANSFORMER AND REMOVE THE TWO FRONT SCREWS ON THE TRANSFORMER. PLACE THE HEAT SINK UNDER THE TWO FRONT FEET OF THE TRANSFORMER, ALIGNING THE SCREW HOLES. REINSTALL THE TWO FRONT SCREWS ON THE TRANSFORMER. RETIGHTEN THE TWO REAR SCREWS ON THE TRANSFORMER.

REFER TO FIGURE 2 WHEN DOING THE FOLLOWING:

SOLDER THE RED WIRE IN THE OFFSET HOLE WHERE THE BR1 WAS LOCATED (POSITIVE TERMINAL). SOLDER THE BLACK WIRE TO THE OPPOSING HOLE (GROUND TERMINAL). SOLDER THE TWO WHITE WIRES TO THE REMAINING HOLES (AC TERMINALS). SOLDER THE BANDED SIDE OF THE TRANSORB (DIODE, IF ANY) TO THE OFFSET HOLE ON THE BOARD (POSITIVE) AND THE UNBANDED SIDE TO THE OPPOSING HOLE (GROUND). RESOLDER THE F1 FUSE HOLDER CONNECTIONS.

REINSTALL THE POWER SUPPLY BOARD. CONNECT THE RED WIRE TO THE OFFSET LEG OF BR1, THE BLACK WIRE TO THE OPPOSING LEG, AND THE TWO WHITE WIRES TO THE REMAINING LEGS.



GAME: ICE COLD BEER, ZEKE'S PEAK

SUBJECT: BALL STICKS BETWEEN HOLE AND BAR IN ATTRACT MODE.

SOLUTION: REPLACE EPROM ICB-23A OR ZP-23A WITH PROGRAM UPGRADE.

PARTS NEEDED:	QTY	DESCRIPTION	PART NO.
	1	ICB-23A UPGRADE EPROM	16-00033-223
		-----OR-----	
	1	ZP-23B UPGRADE EPROM	16-00034-223

DISPOSITION OF OLD PARTS: RETURN FOR CREDIT

PROCEDURE: REMOVE EPROM ICB-23A (FOR ICE COLD BEER) OR EPROM ZP-23A (ZEKE'S PEAK) AT LOCATION U23 ON THE GAME LOGIC BOARD, AND REPLACE WITH THE APPROPRIATE UPGRADE EPROM, ICB-23A FOR ICE COLD BEER, OR AP-23A FOR ZEKE'S PEAK. USE CARE WHEN INSTALLING THE UPGRADE EPROM, WATCHING FOR BENT PINS, AND ORIENTING THE PIN #1 NOTCH THE SAME WAY AS THE INDENT IN ONE END OF THE EPROM SOCKET.

GAME: ICE COLD BEER, ZEKE'S PEAK

SUBJECT: POWER SUPPLY +5 VOLTS IS RINGING (OSCILLATING)

SYMPTOM: ONLY THE MOTOROLA LM323K REGULATOR I.C. IS SUBJECT TO AN OSCILLATION OR RINGING ON THE INPUT BYPASS CIRCUIT. THE NATIONAL LM323K IS NOT AFFECTED. THE OBSERVABLE SYMPTOM OF THE OSCILLATION IS ERRATIC OPERATION OF THE GAME, AND UPON MEASURING THE +5 VOLT SUPPLY, IT WILL BE LOW OR DEAD. THE OSCILLATION IS OCCURRING AT ABOUT 1 MHZ, AND MAY KILL THE SUPPLY'S OUTPUT (DC LEVEL), BUT WILL HAVE A 1 MHZ A.C. LEVEL OF ABOUT 3-4 VOLTS P-P.

SOLUTION: REPLACE C106 WITH A LARGER VALUE CAPACITOR FOR COMPATIBILITY.

PARTS NEEDED:	QUA	DESCRIPTION	PART NO.
	1	CAPACITOR, 10uf, 25V	12-30001-106

DISPOSITION OF OLD PARTS: SCRAP

PROCEDURE: IF THE MOTOROLA LM323K MUST BE USED, REPLACE THE C106 ON THE GAME LOGIC BOARD WITH A 10uf TANTALUM ELECTROLYTIC OR A 10uf ALUMINUM ELECTROLYTIC CAPACITOR. C106 IS PRESENTLY A 0.1uf CAPACITOR. OBSERVE POLARITY WHEN REPLACING C106.

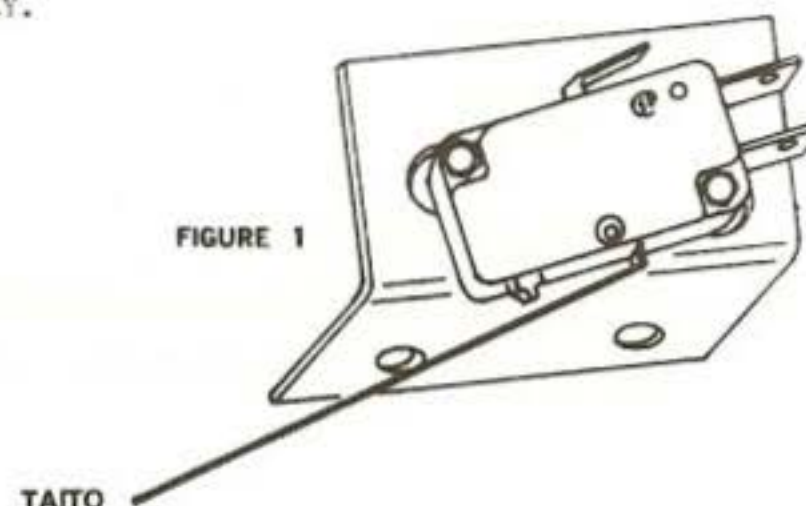
GAME: ICE COLD BEER, ZEKE'S PEAK

SUBJECT: ADJUSTING HOLE SWITCHES WITHOUT A SCOPE.

SOLUTION: BY FOLLOWING THE INSTRUCTIONS BELOW, THE SWITCH TIMING SHOULD BE WITHIN TOLERANCE.

PARTS NEEDED: NONE

PROCEDURE: DISCONNECT THE WIRES ON THE SWITCH THAT NEEDS ADJUSTMENT. REMOVE THE SWITCH MOUNTING BRACKET WITH SWITCH STILL ATTACHED. LOOSEN THE TWO SCREWS. POSITION THE SWITCH SO THE SCREWS ARE IN THE MIDDLE OF THE HOLES IN THE MOUNTING BRACKET (SEE FIGURE 1). TIGHTEN THE SCREWS. REMOUNT THE MOUNTING BRACKET. ENSURING THAT THE ACTUATORS ARE IN THE MIDDLE OF THE CUT-OUT IN THE SWITCH PLATE PLAYFIELD. RECONNECT THE WIRES ON THE SWITCH AND REMOVE THE COVER GLASS. PUT A CREDIT ON THE GAME. AND PUSH THE PLAY BUTTON. PUT YOUR HAND OVER THE BALL GATE TO CATCH THE BALL WHEN IT COMES OUT. INSERT THE BALL INTO THE HOLE OF THE SWITCH YOU JUST ADJUSTED. INSURE THAT THE BALL DOES NOT HANG UP ON THE SWITCH AND THAT THE BONUS WILL TALLY PROPERLY.



GAME: ICE COLD BEER, ZEKE'S PEAK

SUBJECT: LUBRICATION OF SIDE (VERTICAL) "GUIDE" RODS.

SOLUTION: THE SIDE RODS ARE CAUSING THE TELESCOPING ROD TO MOVE UP AND DOWN ERRATICALLY, OR IN A JERKING MOTION, AND NEED TO BE LUBRICATED.

PROCEDURE: DEPENDING ON THE TYPE OF SIDE RODS, THE LUBRICANT RECOMMENDED VARIES. IF THE SIDE RODS ARE STAINLESS STEEL, A LITHIUM-BASED GREASE IS RECOMMENDED. IF THE SIDE RODS ARE CHROME (NEWER GAMES HAVE THESE) THEN USE A REGULAR GREASE SUCH AS BEARING OR AXLE (HEAVY) GREASE. THE TELESCOPING ROD SHOULD BE LUBRICATED LIGHTLY WITH A SILICON-BASED GREASE. THE SHEET METAL "STIFFENER" VANES THAT RUN PARALLEL TO THE SIDE RODS (IN THE REAR OF THE PLAYFIELD) ALSO SHOULD BE LUBRICATED WITH A LITHIUM-BASED GREASE.



GAME: ICE COLD BEER, ZEKE'S PEAK

SUBJECT: ERRANT BALL SOLENOID WILL NOT MAKE THE BALL TRAVEL TO THE BALL GATE. THIS ALSO WILL INCREASE THE RELIABILITY OF THE SOLENOID.

SOLUTION: ADDING A 1000uf 50V CAPACITOR TO POWER SUPPLY TO HELP MAINTAIN CONSISTENT CURRENT FOR SOLENOID AND INCREASE PLUNGER TRAVEL.

PARTS NEEDED:	QUA	DESCRIPTION	PART NUMBER
	1	PLUNGER	61-00317-002
	1	1000uf 60V CAP	12-20001-108

PROCEDURE: ADD THE CAPICITOR ACROSS TP7 AND TP8 ON THE POWER SUPPLY, WITH THE POSITIVE TERMINAL ON TP7. INVERT THE RUBBER STOPPER BUMPER, FOR THE PLUNGER, SO THE LARGE END IS ON THE BOTTOM. ADJUST THE SOLENOID SO THE PLUNGER HITS THE BALL SQUARELY IN THE MIDDLE OF THE BALL. IF THE BALL STILL WILL NOT TRAVEL TO THE BALL GATE, CHANGE THE PLUNGER WITH THE NEW PLUNGER.

GAME: ICE COLD BEER, ZEKE'S PEAK

SUBJECT: THE SWITCHES IN THESE GAMES ARE IN A MATRIX. IF ONE OF THE SWITCHES ON A SENSE LINE IS STUCK CLOSED OR IS SHORTED, THE OTHER SWITCHES ON THE SENSE LINE WILL NOT BE READ.

SOLUTION: THE FOLLOWING IS A CHART FOR THE SWITCH MATRIX.

PROCEDURE: IF A SWITCH WILL NOT WORK, CHECK THE OTHER SWITCHES ON THE SAME SENSE LINE.

	SCAN0	SCAN1	SCAN2
SENSE0	START SWITCH	HOLE 1	HOLE 8
SENSE1	COIN SWITCHES	HOLE 2	HOLE 9
SENSE2	BALL GATE SWITCH	HOLE 3	HOLE 10
SENSE3	TILT SWITCHES	HOLE 4	TICKET TEST SWITCH
SENSE4	SERVICE SWITCH	HOLE 5	ERRAND BALL SWITCH
SENSE5	HOPPER STOP	HOLE 6	NOT USED
SENSE6	HOPPER MOTION (NOT USED)	HOLE 7	NOT USED

GAME: ICE COLD BEER, ZEKE'S PEAK

SUBJECT: LIMIT SWITCHES NOT BEING RECOGNIZED WHEN BAR ACTUATES SWITCH.

SOLUTION: THE FOLLOWING IS THE TROUBLE SHOOTING PROCEDURE TO FOLLOW FOR THE ABOVE PROBLEM.

PARTS NEEDED: NONE

PROCEDURE: AFTER A TILT OR IF THE BALL IS NOT IN THE BALL GATE STATION AT THE START OF THE ATTRACT MODE OR A GAME, THE GAME WILL GO INTO A "LOST BALL SEARCH". THE LEFT SIDE OF THE TELESCOPING ROD WILL GO UP UNTIL THE UPPER LEFT LIMIT SWITCH IS ACTUATED, WHILE THE RIGHT SIDE WILL GO DOWN UNTIL THE LOWER RIGHT LIMIT SWITCH IS ACTUATED. THEN THE RIGHT SIDE WILL GO UP UNTIL THE UPPER RIGHT LIMIT SWITCH IS ACTUATED. THEN THE LEFT SIDE WILL GO HALF WAY DOWN. THEN THE RIGHT SIDE WILL GO DOWN UNTIL THE LOWER RIGHT LIMIT SWITCH ACTUATES. THEN THE LEFT SIDE WILL GO DOWN UNTIL THE LOWER LEFT LIMIT SWITCH IS ACTUATED. THIS WILL HAPPEN UNTIL THE BALL GATE SWITCH IS ACTUATED. IF A LIMIT SWITCH IS ACTUATED, AND THE MOTOR WILL NOT STOP, IT MEANS THAT THE BOARD IS NOT RECOGNIZING THE LIMIT SWITCH. THIS COULD BE CAUSED BY A CABLE OR A BOARD PROBLEM. TO ISOLATE THE PROBLEM MEASURE THE VOLTAGE ON THE J1 CONNECTOR FOR THE ASSOCIATED SWITCH'S SIGNAL GOING "LOW" (GROUND) AS THE SWITCH IS ACTUATED (REFER TO FIGURE 31 IN THE MANUAL: i.e. 1 MOT UP, @ J1 PIN 5). IF IT IS "LOW", THEN IT IS A BOARD PROBLEM. IF IT IS A "HIGH", (+5 VOLTS) THEN IT IS A CABLE OR A SWITCH PROBLEM.

Bally MIDWAY

GAME: JR. PAC-MAN FIELD KIT
(Shipped Before January 6, 1984)

SUBJECT: LOSS OF COIN COUNTER PULSE WHEN USING
STATIC FILTER BOARD (A080-91465-D595)

MODIFICATION

1. Add 3 inch jumper on solder side as it is shown in Figure #1.
2. Disregard numbers on female connector of Static Filter Board.

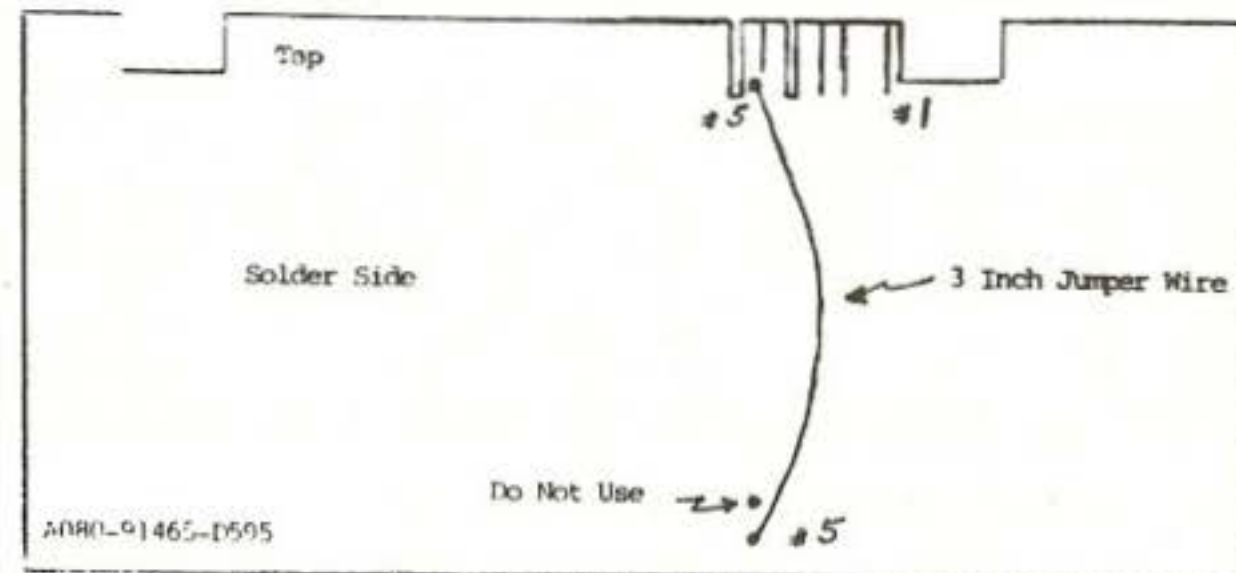


Figure #1

GAME: SPY HUNTER (UPRIGHT & SIT DOWN)

SUBJECT: LOGIC BOARD INTERCHANGING BETWEEN UPRIGHT AND SIT DOWN

1. Due to a connector change, the logic boards are not interchangeable.
2. I repeat, the boards are not interchangeable.

SUBJECT: SOUND IN ATTRACT MODE

1. Switch setting located at No. #1 switch (B3) sound I-O Board
2. When switch 2 is ON, sound will be provided in the attract mode.
3. When switch 2 is OFF, sound will not be provided in the attract mode.

GAME: SPY HUNTER, TAPPER, & ROOT BEER TAPPER

SUBJECT: FUSE CHANGE 125VA POWER SUPPLY
(A082-90412-0000)

1. Change fuse F1 on power supply from 3/8 amp Slow Blow to 1/2 Amp Slow Blow.
2. The fuse change is also for all MCR II games with 125VA power supplies.

GAME: NFL FOOTBALL

SUBJECT: DIP SWITCHES (Switch No. 1 at B3)

NFL OPTION SWITCH SETTINGS										
SWITCH NO. 1 - AT B 3 - LOCATED ON SOUND I/O P.C. BOARD										
GAME PLAY:	SW#1	SW#2	SW#3	SW#4	SW#5	SW#6	SW#7	SW#8	SW#9	SW#10
**2 MINUTE GAME	ON	ON				NOT USED	NOT USED	NOT USED	NOT USED	
3 MINUTE GAME	OFF	ON								
4 MINUTE GAME	ON	OFF								
5 MINUTE GAME	OFF	OFF								
**50¢ GAME			ON							
25¢ GAME			OFF							
ATTRACTION SOUNDS OFF				ON						
**ATTRACTION SOUNDS ON				OFF						
**DISPLAY (TIME) OFF					ON					
DISPLAY (TIME) ON					OFF					
FREEZE VIDEO										ON
**NORMAL OPERATION										OFF
SWITCH NO. 3 - AT D 14 - LOCATED ON SOUND I/O P.C. BOARD IS NOT USED										
**FACTORY RECOMMENDED SETTINGS										

SUBJECT: RCA VIDEODISC SKIPPING

1. Side one of your VideoDisc is completely played through several times at Bally Midway to remove excessive oil. (Factory break-in)
2. Always use side one of your VideoDisc when inserting into a VideoDisc player in a new game to minimize skipping.
3. When additional cleaning is needed, unloading and loading the VideoDisc several times into the player cleans both the disc and stylus.
4. When side one is defective, use side two and repeat steps one and three.
5. In the field, step one can be done by starting the game and removing connector J-3 on the IPU Board. The VideoDisc player will now play completely through. (No video will appear on screen.)

SUBJECT: NFL PROGRAM UPDATE KIT

1. Due to further enhancements in the "NFL Football" program code, this update kit has been developed and will be offered to the operators at no cost. The operators should be notified to contact their distributors to receive the kit. It is easily installed and will correct the code errors found in the current edition. These corrections are listed on the following page.
2. All games shipped from the factory before January 15th will need the enhancement kit.
3. The kit will include six (6) PROMS and installation instructions.
4. Advise operators to follow the installation instructions. This is important!

NFL FOOTBALL

1. A highly accurate code for storing credits has been implemented, thus eliminating the current "free credit" problem.
2. A credit limit has been added, allowing no more than 20 credits to be stored.
3. The service credit switch located inside the coin door is now functional. (Activating this switch will add credits without incrementing the coin counter.)
4. Attractive "on screen" graphics have been added to direct players to their respective controls, i.e., "You Are The Chargers On Offense."
5. The "One Player" game mode has been enhanced to allow the player to play a greater variety of combinations. What this will mean to the player is a more challenging play action game. Although always starting the game on offense, he can now lose the ball to the opposing team. In addition, he will be playing either for the Raiders or the Chargers depending on a random selection at the start of a game.
6. The "Two Player" game mode has been enhanced in respect to the variety of plays seen by both players. This change provides a random starting position for each player rather than the current fixed team placement. For example, the left side controls may start as the Chargers On Offense, the Chargers On Defense, the Raiders On Offense, or the Raiders On Defense. The same applies for the right side controls.
7. During the manufacturing process of the disc, it is lubricated with a very fine oil. This is done to reduce wear and extend the overall life of the disc and stylus. During this process, a build-up of oil may form in some areas of the disc. As a result, you may occasionally witness the stylus skipping over the disc during play. As the game is played, this condition will subside. Due to changes #4 and #5, more of the disc is being used during normal play and these changes will shorten the break-in time considerably.
8. The "Coin Toss" has been removed and replaced with a computer generated graphic display, dictating who gets the ball. Since the disc will be searching during this screen, it will greatly reduce the search time once the game begins.

SUBJECT: RCA VIDEODISC PLAYER SHUT DOWN PROCEDURE

When removing the disc from the RCA Video Disc Player, the disc door must be closed. The following sequence will close the disc door and prevent dust contamination.

1. Turn main power off.
2. Disconnect J3 from the IPU Board. (This unleashes the player from the logic.)
3. Turn main power on.
4. Press "Reject"—Located on front label of player.
5. Insert disc cover when display reads "U L"—Indicating unload.
6. After disc has been removed, turn power switch off (located on front panel of player) and wait momentarily until door closes.
7. Turn main power off.
8. Replace J3 on IPU Board.

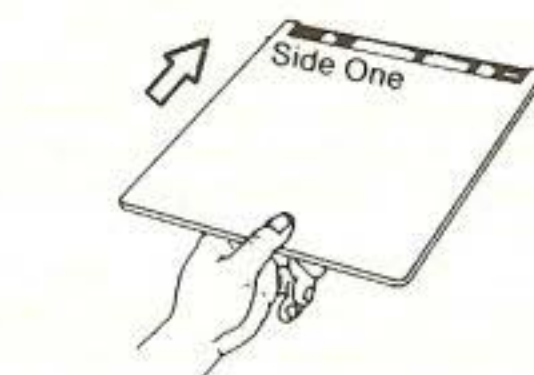
The player should NOT be allowed to sit idle with the door open for long periods of time.

SUBJECT: VERTICAL ROLL CONDITION WHEN ADDING DISPLAY MONITOR (Slave Monitor on Top of Game)**MODIFICATION**

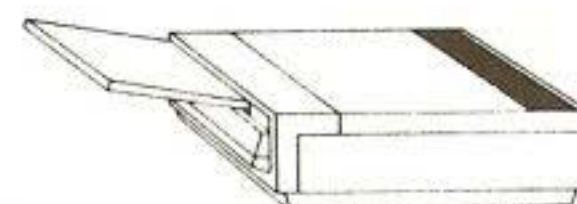
1. Check for proper wiring on monitor interface cable.
2. Change IPU Board IC's at location 11D, 12C and 12D from 14016 to 4066. (A080-91695-AA34)
3. If needed, adjust vertical rolling with vertical roll pot.

SUBJECT: RCA VIDEODISC PLAYERRE: REVISED SERVICE BULLETIN
CONCERNING RCA VIDEODISC PLAYER**TO OPERATE DISC PLAYER****REMOVE SHIPPING TABS FIRST**

1. THE VIDEO DISC COMES IN A SLEEVE WHICH IS MOUNTED ON TOP OF THE PLAYER. LOOSEN TWO (2) WING NUTS TO REMOVE IT.
2. Push Power Button to turn Player "On." The indicator will flash on the Player's Digital Display
3. Insert notched edge of disc sleeve into Player slot at a slight angle as illustrated. Push the disc sleeve forward until you feel the Player mechanism pull the disc sleeve into the slot. The Player automatically loads the disc and returns the empty sleeve.
4. Remove the sleeve from the Player to start disc play.
5. DO NOT DISCARD SLEEVE! DISC CANNOT BE REMOVED WITHOUT IT
6. TO REMOVE DISC, TURN POWER OFF. REMOVE JACK J3 ON I.P.U. CARD. TURN POWER ON. PRESS 'REJECT'. DISC WILL RETURN TO THE UNLOAD POSITION
7. To remove the disc from the Player refer to steps 3 and 4.



Always insert notched edge of sleeve into VideoDisc Player at a slight angle.



8. TO USE OPPOSITE SIDE OF DISC OR NEW DISC—REINSERT DISC AS IN STEPS 3 AND 4. TURN POWER OFF. PLUG IN J3. TURN POWER ON. GAME WILL OPERATE NORMALLY.
9. Don't attempt to open disc sleeve. Don't transport Player with disc inside.

Bally MIDWAY

ASTRON BELT TO GALAXY RANGER CONVERSION KIT INSTALLATION INSTRUCTIONS

The purpose of this instruction sheet is to provide you with some basic guidelines for installing the parts provided in your Conversion Kit.

TURN THE POWER OFF TO THE GAME!

E P R O M S

EPROM	LABEL	HITACHI SYSTEM	PIONEER SYSTEM
		LOCATIONS ON EPROM BOARD	LOCATIONS ON EPROM BOARD
EPH-5633 (IC 1)		IC 1	NOT USED
EPH-5634 (IC 2)		IC 2	NOT USED
EPR-5592 (IC 3)		IC 3	IC 15
EPR-5593 (IC 4)		IC 4	IC 29
EPR-5594 (IC 7)		IC 7	IC 7
EPR-5595 (IC 6)		IC 6	IC 5
EPR-5612 (IC 9)		IC 9	IC 15
EPR-5611 (IC 10)		IC 10	IC 14
EPR-5613 (IC 5P)		NOT USED	IC 3
EPR-5614 (IC 10P)		NOT USED	IC 10

Depending on whether your game contains a HITACHI or a PIONEER video system, locate the EPROMS listed in the above table for your system. They are located in the indicated positions on your system's EPROM BOARD.

CAREFULLY remove the EPROMS currently in the indicated positions and set them aside. Install the EPROMS provided in your kit in the positions you just emptied.

Locate and remove your game's SOUND BOARD. Set it aside.

Install the new SOUND BOARD (provided in your kit) in the position you removed the old SOUND BOARD from.

REMOVE your game's header and replace it with the new one provided in your Conversion Kit.

Replace any other remaining miscellaneous items with those provided in your Conversion Kit.

Re-apply power to your game and remove your old Video Disc. Replace it with the new Video Disc provided in your Conversion Kit.

NOTE: The Hitachi System and Pioneer System use two different EPROMS. Order the proper kit.

This new feature is designed to help you fix MINOR problems with your games.

The information in this issue was supplied by the manufacturers and is reproduced directly from their bulletins to reduce the chance for error. You can be assured that all information we provide you is as accurate as it can be.

Please do NOT attempt to make a repair unless you know what you are doing, especially repairs to printed-circuit boards (which can be easily ruined). If you don't know what you are doing, calling a professional is cheaper in the long run and will result in more reliable operation of your games. Down time costs you money.

SPACE AVAILABLE

The "Sente" System

A lot has been said, positive and negative, about the new Sente Video Game System. But, what is the system and how does it work?

An operator, wanting to add a "Sente" game to the arcade or route, buys a "Game Frame." The "Frame" includes the cabinet, side panels, monitor, and basic computer. The "Frame" is made of metal and the side panels of propylene skin, which is burn, impact and stain resistant. If one of the lower side panels is damaged, it can be turned inside-out for a brand-new look. The "Game Frame" is very well constructed and conversions are extremely easy. The monitor can be changed from horizontal to vertical.

The operator then goes to a Sente distributor, purchases a control panel (if necessary) and side graphics (optional), and "rents" a game cartridge (called a SAC-PAC). The rental will run around \$20 per week.

ANALYSIS - When you buy a regular game (kit or dedicated) you are betting that the game will be popular and will earn a good income over a period of time. If it does, you win, and the game has a good resale value. If it doesn't, you are the proud owner of a "turkey" with little resale value. With many games lasting 3-6 months) and some only 2-4 weeks), you will probably come out ahead with the Sente system over the long haul (considering the track record of most games). When a game's revenues fall below your predetermined standards, return the cartridge and the rental stops. Since some games will do well in some locations and not in others, you can try EVERY game, no matter what it is. Almost all games will do well the first 2-4 weeks. If it dies within that period, all you paid was \$40-80. Sente loses, not you. If a game is a hit, you both win.

The following comparison chart is based on the purchase price of a regular game or rental of a Sente cartridge. We have NOT taken into account the resale value of a regular game because it can vary widely. But you should consider that when you look at the chart.

	COST PER WEEK			
	4 weeks	3 months	6 months	1 year
Sente SAC	\$ 20	\$ 20	\$ 20	\$ 20
Kit (\$800 cost)	200	61	31	15
Dedicated (\$2500)	625	192	96	48
Dedicated (\$3000)	750	231	115	58

The route operator can (hopefully) make arrangements with his location that the first \$20 of earnings each week come "off the top" and then split the remainder. The net result is that the operator and the location split the weekly rental (each paying \$10). An operator with several games on location will find it very easy to "rotate" games because moving the cabinet is not necessary.

Everyone owning a Sente System will have to watch earnings very carefully, and not forget to turn in the game cartridge when earnings drop too low.

Now, the rub. The games made available MUST be good. The first game, "Snake Pit," isn't exactly a smashing success, and their second game "Snack Attack" will probably suffer the same fate (we aren't impressed with it). For the Sente System to work, they FIRST must release a HIT game. Remember Data East? NOTHING really happened with their "cassette system" until "Burger Time" and then "Bump'n'Jump."

Second, what happens if Sente "obsoletes" the system. We aren't saying they will, but you have to consider it, especially if they invent a better system.

Third, Sente is going to have to release new games when they are needed, NOT on a rigid 3-4 month schedule. If a game dies, an operator doesn't want an empty game cabinet. If a game is a hit and doing well after 6-9 months, I doubt that the operator is going to be very

continued on page 14

EDITORIAL

We hope you like the improvements in this issue. We have come a long way since our first issue, but we still have a long way to go.

Our ultimate goal is to have the BEST and MOST-WIDELY READ industry newsletter.

Please take a good look at the advertisements in this issue. Since we are 100% advertiser supported, these companies paid the cost of printing and mailing it. If they are offering something of interest to you, please give them a call. Advertisers need results. If they get them, they will continue to advertise and we can bring you a better and better newsletter each month.

We would like to hear from you!! Let us know what you like and dislike about the publication? What would you like to see added? Deleted? How can we improve what we are presently doing. All comments are welcome.

TO POTENTIAL ADVERTISERS: Free distribution is limited to arcade and route operators, distributors, and game manufacturers within our circulation area, which will be expanding soon. All others MUST subscribe. That makes our distribution for the above categories in excess of 95%, the highest in the industry. In contrast, circulation of Play Meter to the above categories is less than 65%. And, we reach many operators and distributors who don't receive other publications. Advertise today.

* Play Meter - November, 1983.

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Punchout..... 3195	
Fax (elegante)..... 1195	DRAGON'S LAIR..... 1995

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Space Ace.....\$ 995	Champion Baseball.....\$ 645
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BACK ISSUES, SAMPLES, ISSUES NOT RECEIVED, ETC.

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out boxing. Available as an upright.

CONTROLS - Has a 4-way joystick. Up and down determines the position of your boxer's hands to guard against the champ's punches. Left and right positions allow you to "dodge" blows. The guard positions are also used together with a "left blow" and a "right blow" button to place your blow in the desired place, head or body. There is a "K.O." button which will be explained later.

GAME ACTION - Two boxers enter the ring, the champion and you. Your goal is to knock out the champ before he does it to you, or before the 3-minute round is over. Has 2 monitors, the upper one providing the game statistics, and lower one the action. The respective boxer's power levels are constantly changing up and down, depending on the skill of the player. Receiving punches reduces the power level, successful punches and blocks increases the power level. The higher your power, the stronger your punches will be. A status meter shows who has the advantage at any given time. When either boxer's power level goes all the way down, a K.O. can be made against the vulnerable boxer. When the champ is in that condition, a "K. O." flashes on the screen. If you are successful in K. O.ing the champ within the allotted time, the referee counts to 10 and you prepare to face another more difficult opponent. If the champ K. O.'s you or the time runs out, the game is over. As you play, a bonus timer counts down. The faster the K. O., the more bonus points awarded.

ORIGINALITY - Another sports oriented game, when will it end. The first boxing game. The statistics on a separate screen allows more area for game play. (6)

GRAPHICS - Playfield was not too colorful, but player detail was good. The crowd has reasonable detail, moved, and even had camera flashes, but the color was 3 shades of blue (however, we do not consider this a negative because more color would interfere with the game play). (5)

SOUND - Quality was good and nothing was left out. Sounds included announcement of champion player, live-action commentary (left, right, body blow, etc.), and

crowd sounds. (7)

OPINION - It looks like Nintendo has another hit on it's hands. The controls are easy to use and understand, even for someone not familiar with boxing. It is easy to hit the champ (relatively) but difficult to tell where the champ will hit next (as it should be). Statistics are easy to read and understand. The screen announcing the champ's statistics at the start of each round does not stay on the screen long enough to read except for a speed reader (who tests this type of thing anyway?).

OVERALL RATING - (8)

EARNINGS POTENTIAL - (8) even with the higher price.

SENTE (continued)

receptive to a new game, especially if he has to make a choice between the two. Sente will have to closely monitor the number of cartridges out on location and survey the operator's income.

We have tried to be objective in this article, giving you both the pluses and the minuses. Now, it's up to you to decide what's best for you. We wish Sente the best of luck with their new system.

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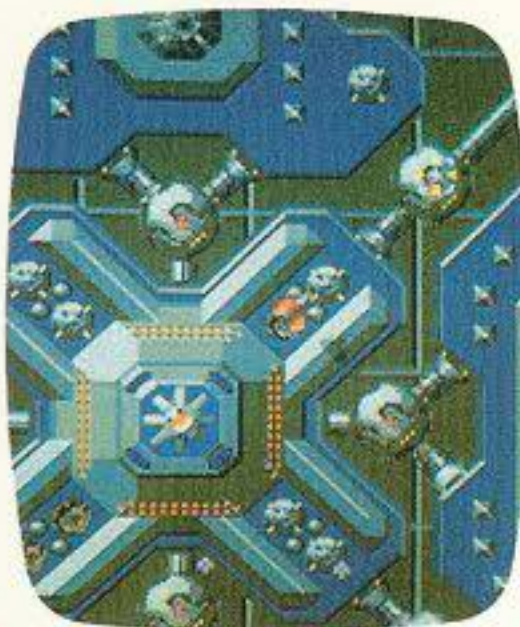
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